

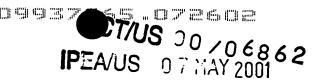
1. A vector comprising:

- a) a human Protein Translation Peptide Elongation Factor-1 α promoter;
- b) a nucleic acid encoding a tetracycline controlled transactivator, wherein the expression of said transactivator is under the control of the promoter;
- c) a tetracycline inducible operator binding element under the control of the nucleic acid encoding the transactivator, and
- d) a gene of interest under the control of the promoter.
- 2. The vector of claim 1, wherein the vector is a plasmid.
- 3. The vector of claim 1, wherein the vector is as set forth in figure 1.
- 4. An isolated cell comprising the vector of claim 1.
- 5. The cell of claim 4, wherein the cell is from a cell line.
- 6. The cell of claim 5, wherein the cell line is HeLa (human cervix), HO-1 (human melanoma), MCF-7(human breast), PC3 (human prostate) or DU-145 (human prostate).
- 7. The cell of claim 4, which consistently expresses tetracycline repressor.
- 8. A cell comprised of Protein Translation Peptide Elongation Factor-1 α promoter and nucleic acids encoding reverse tetracycline controlled transactivator, wherein the expression of said transactivator is under the control of Protein



Translation Peptide Elongation Factor-1 α promoter.

- 9. A non-human animal comprising the vector of claim 1.
- 10. The animal of claim 9, wherein the animal is a mouse.
- 11. A method of generating a reverse tetracycline controlled transactivator expression system for inducible tetracycline regulated gene expression comprising:
 - a) isolation of a DNA fragment encoding the reverse tetracycline controlled transactivator by restriction enzyme digestion.
 - b) generation of Protein Translation Peptide Elongation Factor-1 α promoter vector, by restriction enzyme digestion;
 - c) directional cloning of reverse tetracycline controlled transactivator into Protein Translation Peptide Elongation Factor-1 α promoter vector by ligation of 5' EcoRI compatible restriction enzyme overhangs;
 - d) directional cloning of reverse tetracycline controlled transactivator into Protein Translation Peptide Elongation Factor-1 α promoter vector by Klenow fragment meiadte blunt end generation of 3' Bam HI end of DNA fragment encoding the reverse tetracycline controlled transactivator and 3' XbaI end of Protein Translation Peptide Elongation Factor-1 α promoter vector; and
 - e) blunt cloning of partially ligated fragment to produce Protein Translation Peptide Elongation Factor-1 α promoter vector expressing reverse tetracycline controlled transactivator.
- 12. The method of claim 11, wherein the fragment of 11(a) is an Eco RI-BAM HI fragment.



- 13. The method of claim 11, wherein the mammmalian expression vector of 11(b) is pCDEF3.
- 14. The method of claim 11, wherein the cloning of 11(a) is at the 5' Eco RI and 3' BAM HI sites.
- 15. The method of claim 11, wherein the ligation of 11(c) is at the 5' Eco RI site of pCDEF3.
- 16. The method of claim 11, wherein the ligation of 11(d) is at the 3' XbaI site of pCDEF3.
- 17. A vector generated by the method of claim 11.
- 18. A method for screening for an anti-tumor drug which comprises administering to a transgenic non-human animal a drug wherein the animal inducibly expresses or represses expression of a gene of interest under regulation of tetracycline or deoxycycline and wherein the gene of interest is associated with cancer, and determining whether the animal develops a tumor thereby screening for an anti-tumor drug.
- 19. A method for expressing a gene of interest which comprises contacting the cell of claim 4 with an inducer of the tetracycline inducible operator binding element so as to cause the cell to express the gene of interest.
- 20. The method of claim 19, wherein the inducer is tetracycline or deoxycycline.